

## **Comment Area: Soil**

### **Tritium Sampling & Analysis Plan (TSAP)**

- Shallow soil samples will be collected at 56 locations to a maximum distance of approximately 2000 feet from the tritium stack. Sampling locations are primarily in a radial pattern with three concentric rings at distances of 500, 1000, and 2000 feet from the stack. Some additional sampling will be done in the predominant wind direction at various distances, and near the base of the stack.
- Samples will be collected from approximately 0.5 to 1.0 foot below ground surface. Locations may be modified in the field based on site constraints.
- Based on the results of the initial sampling, additional samples may be collected. The requirement to collect additional samples will be based on two criteria: 1) potential health risk and 2) evaluation of whether the area of contamination has been adequately determined.

### **Ongoing Laboratory Programs and Activities Related to RCRA Corrective Action Program**

A limited number of soil samples are collected annually, with details of the sampling program evaluated each year in order to formulate an appropriate program. In 1999, soil samples from the top 2 to 5 centimeters (1 to 2 inches) of surface soils were collected from three locations around the site and one off-site environmental monitoring station, coincident with ambient air sampling stations. Samples were analyzed for gross alpha and gross beta radiation, gamma emitters, tritium, metals, moisture content, and pH.

Under the RCRA Corrective Action Program, soil samples for tritium analysis have generally been collected for purposes such as monitoring well and lysimeter installations and closure of the Hazardous Waste Handling Facility. In addition, a considerable amount of shallow samples has been collected that has been used to characterize the magnitude and extent of tritium contamination in the soil.

## **Task Force and Community Comments**

1. Modify the present sampling plan to incorporate some facets that would help describe past legacy. Sample a number of locations and look at the soil profile from various layers in detail. (8/10, p. 67, 8; 8/10, p. 67, 21 and p. 69, 25)
2. The HASL-300 core method should be used for soil sampling (Franke/IFEU Preliminary Report).
3. It is recommended that further discussion be provided for soil sampling depth within the top two feet of soil. In particular, EPA believes that the soil nearer the surface may be dry during the summer season and hence have low tritium levels. Samples should be taken in the sub-interval with the highest moisture content. (U.S. EPA letter to Lab, 8-20-99, Sample Collection 3).
4. For the purpose of evaluating the site for the National Priorities List, soil samples must be collected within 2 feet of the surface according to Section 4.7 of the Site Inspection Guidance. Consequently, samples from additional depth increments may not be used in evaluating the soil exposure pathway. (U.S. EPA letter, comments on IFEU report, to City of Berkeley, 8-9-00.)